

Village Creek Water Reclamation Facility



Appendix 5a: Biosolids Goals and Objectives Summary—EMS Element 5.0

GOAL: Sludge De-Gritting Disposal					
OBJECTIVE	MILESTONE	RESPONSIBLE PARTY	TARGETED COMPLETION DATE	STATUS	KEY OUTCOMES
1. Quantify grit removal by clarifiers	Complete/not complete	Ana Pena-Sr. Professional Engineer	June 30, 2014	Complete (March 13, 2014) (May 27, 2014) (June 9, 2014)	<ul style="list-style-type: none"> Environmental Performance Regulatory Compliance Improve Biosolids Management Practices
2. Install grit removal alternative (grit dewatering and storage)	Complete/not complete	Ana Pena-Sr. Professional Engineer	July 16, 2014	Complete (September 12, 2014)	
3. Collect grit sample to verify compliance with landfill disposal requirements	Complete/not complete	Ana Pena-Sr. Professional Engineer	July 16, 2014	Complete (July 16, 2014)	
4. Installation of grit washer	Complete/not complete	Ana Pena-Sr. Professional Engineer	September 15, 2014	Complete (September 15, 2014)	
5. Begin hauling grit to landfill.	Complete/not complete	Ana Pena-Sr. Professional Engineer	August 1, 2014	Complete (September 19, 2014)	
6. One month trial period to evaluate effectiveness	Complete/not complete	Ana Pena-Sr. Professional Engineer	October, 15 2014	Not Complete	
Divert 100% of collected grit to landfill	Complete/not complete	Ana Pena-Sr. Professional Engineer	November 1, 2014	Not complete	
<i>An initial trial of the grit removal system occurred on 6-16-14 and continued overnight. The initial grit removed on 6-16-14 was collected as well as another sample collected on the morning of 6-17-14. They were submitted together as one sample for a paint filter test and TCLP. The grit removal system incurred some issues after it ran overnight. The dates for objectives 2 and 3 were modified to reflect when the grit removal system would be ready again.</i>					

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GOAL: Create a Biosolids Master Plan					
OBJECTIVE	MILESTONE	RESPONSIBLE PARTY	TARGETED COMPLETION DATE	STATUS	KEY OUTCOMES
1. Award contract for project	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	April 30, 2012	Complete	<ul style="list-style-type: none"> Environmental Performance Regulatory Compliance Improve Biosolids Management Practices
2. Workshop 1 (Kickoff)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	June 7, 2013	Complete	
3. Submit formal data request	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	June 21, 2013	Complete	
4. TMs 1 and 2 Draft (Regulatory & Data)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	July 26, 2013	Complete (September 24, 2013)	
5. Workshop 2 (Criteria & Long List Selection)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	August 26, 2013	Complete (September 25, 2013)	
6. TM 3 Draft (Model and short-term)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	September 23, 2013	Complete (October 22, 2013)	
7. Workshop 3 (Screen Alternatives)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	November 19, 2013	Complete (September 26, 2013)	
8. TM 4 Draft (Market Analysis)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	December 20, 2013	Complete (November 18, 2013)	
9. TM 5 Draft (Detailed Analysis)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	January 7 & 8, 2014	Complete (January 7&8 2014)	
10. Workshop 4 (Detailed Analysis)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	March 17, 2014	Complete (March 17, 2014)	
11. TM 6 Draft (Long Term Plan)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	March 28, 2014	Complete (March 14, 2014)	
12. Workshop 5 (Long Term Plan)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	April 14, 2014	Complete (March 17, 2014)	
13. Draft Master Plan Report	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	June 9, 2014	Complete (July 18, 2014)	
14. Final Master Plan Report	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	July 14, 2014	Not Complete	
15. Contract Review Workshop	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	March 14, 2014	Not Complete	
16. TM & Draft (Contract Review)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	April 28, 2014	Not Complete	
17. Evaluate final master plan	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	July 31, 2014	Not Complete	
18. Develop action plan	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	December 31, 2014	Not Complete	
Reduce odor complaints to Year 2008 level	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	December 31, 2016	Not Complete	

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GOAL: Study to Evaluate Biosolids Odors Associated with High Strength Wastes, Polymer, Lime Addition					
OBJECTIVE	MILESTONE	RESPONSIBLE PARTY	TARGETED COMPLETION DATE	STATUS	KEY OUTCOMES
1. Hire consultant	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	July 5, 2013	Complete	<ul style="list-style-type: none"> Environmental Performance Regulatory Compliance Improve Biosolids Management Practices
2. Consultant-Develop scope of work and sampling plan	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager Perkins Engineering Consultants, Inc.	July 31, 2013	Complete (July 30, 2013)	
3.a Perform sampling and analysis to evaluate odors associated with lime addition	Complete/not complete	Village Creek Personnel & Perkins Engineering Consultants, Inc.	October 31, 2013	Complete (October 21, 2013)	
3.b Perform sampling and analysis to evaluate odors associated with high strength wastes	Complete/not complete	Village Creek Personnel & Perkins Engineering Consultants, Inc.	October 31, 2013	Complete (October 14, 2013)	
3.c Perform sampling and analysis to evaluate odors associated with polymers	Complete/not complete	Village Creek Personnel & Perkins Engineering Consultants, Inc.	November 18, 2013	Complete (November 18, 2013)	
3.d Perform sampling and analysis to evaluate odors associated with lime dosage	Complete/not complete	Village Creek Personnel & Perkins Engineering Consultants, Inc.	December 10, 2013	Complete (December 10, 2013)	
4. Consultant-Produce Technical report summarizing issues found during study	Complete/not complete	Perkins Engineering Consultants, Inc.	June 30, 2014	Complete (June 30, 2014)	
5. Evaluate report & develop action plan	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	July 31, 2014	Complete (June 30, 2014)	
Reduce odor complaints to Year 2008 level	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	December 31, 2016	Not complete	
<i>The technical report shows conclusively that lime has a profound impact on odor generation. As such a new Goal & Objective has been developed for determining the feasibility of eliminating lime from the process (i.e. switching from vector attraction reduction alternative #6 to alternative #1)</i>					

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GOAL: Increase Biosolids Outreach Activities in Response to Public Concerns

OBJECTIVE	MILESTONE	RESPONSIBLE PARTY	TARGETED COMPLETION DATE	STATUS	KEY OUTCOMES
1. Identify four (4) public/third party concerns related to the biosolids value chain	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	September 25, 2014	Complete	<ul style="list-style-type: none">Improve Public Relations
1.a. For each concern, either contact three (3) external agencies or conduct presentation with one (1) external agency	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	September 25, 2014	Complete (November 8, 2013) (April 17 & 18, 2014)	
2. Create online complaint form for citizens to submit directly to biosolids program	Complete/not complete	Magan Lersch-Sr. Environmental Specialist	February 28, 2014	Complete (February 5, 2014)	
3. Update biosolids webpages and include information regarding odor issues/odor monitoring	Complete/not complete	Magan Lersch-Sr. Environmental Specialist	February 28, 2014	Complete (February 5, 2014)	
Determine if feedback has increased due to public outreach activities	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager Magan Lersch-Sr. Environmental Specialist	September 25, 2014	Complete (September 25, 2014)	
See Attachment 1 for details regarding objectives 1. and 1.a From 2012-2013 there were approximately 4 comments received during tours. During 2013-2014, approximately 23 comments were received.					

GOAL: Utilize Scum Screenings as Organic Source for Co-Digestion

OBJECTIVE	MILESTONE	RESPONSIBLE PARTY	TARGETED COMPLETION DATE	STATUS	KEY OUTCOMES
Task 1: Design Phase					<ul style="list-style-type: none">Environmental PerformanceRegulatory ComplianceImprove Biosolids Management Practices
1. Kick-off/Chartering Meeting	Complete/not complete	Ana Pena-Sr. Professional Engineer	March 5, 2014	Complete (March 5, 2014)	
2. Submit Preliminary Design	Complete/not complete	Ana Pena-Sr. Professional Engineer	April 17, 2014	Complete (April 17,2014)	
3. Preliminary Design Review Meeting	Complete/not complete	Ana Pena-Sr. Professional Engineer	May 2, 2014	Complete (May 2, 2014)	
4. Final Design Review Meeting	Complete/not complete	Ana Pena-Sr. Professional Engineer	June 17, 2014	Complete (May 22, 2014)	
5. Deliver Construction Documents	Complete/not complete	Ana Pena-Sr. Professional Engineer	July 2, 2014	Complete (June 2, 2014)	
Task 2: Construction Phase					
1. Begin construction	Complete/not complete	Ana Pena-Sr. Professional Engineer	July 2, 2014	Complete (July 2, 2014)	
2. Complete construction	Complete/not complete	Ana Pena-Sr. Professional Engineer	November 26, 2014	Not complete	
Increase gas production by at least 5%	Complete/not complete	Ana Pena-Sr. Professional Engineer	December 31, 2014	Not complete	

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GOAL: Install 3 rd GBT Unit to Increase Solids Stability					
OBJECTIVE	MILESTONE	RESPONSIBLE PARTY	TARGETED COMPLETION DATE	STATUS	KEY OUTCOMES
Task 1: Design Phase					<ul style="list-style-type: none">Environmental PerformanceRegulatory ComplianceImprove Biosolids Management Practices
1. Conception Design	Complete/not complete	Ana Pena-Sr. Professional Engineer	December 2012	Complete (December 2012)	
2. Final Design	Complete/not complete	Ana Pena-Sr. Professional Engineer	May 2013	Complete (May 2013)	
Task 2: Construction Phase					
1. Begin construction	Complete/not complete	Ana Pena-Sr. Professional Engineer	November 20, 2012	Complete (November 20, 2012)	
2. Complete construction	Complete/not complete	Ana Pena-Sr. Professional Engineer	November 26, 2014	Not complete	
Increase digested sludge percent solids to at least 2.5%	Complete/not complete	Ana Pena-Sr. Professional Engineer	December 31, 2014	Not complete	

GOAL: Arcadis Biosolids Study-Evaluate Solids Production at Village Creek and SOL					
OBJECTIVE	MILESTONE	RESPONSIBLE PARTY	TARGETED COMPLETION DATE	STATUS	KEY OUTCOMES
1. Arcadis hired to perform study	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	April 2, 2014	Complete (2 April 2014)	<ul style="list-style-type: none"> Environmental Performance Regulatory Compliance Improve Biosolids Management Practices
2. Arcadis performs site visits of Fort Worth Facilities	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	May 1, 2014	Complete (1 May 2014)	
3. Data acquisition begins-creation of Arcadis server for uploading files	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	May 6, 2014	Complete (6 May 2014)	
4. Arcadis performs site visit and review of the dewatering facility	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	May 28, 2014	Complete (28 May 2014)	
5. Arcadis submits technical memo on dewatering facility site visit	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	June 19, 2014	Complete (19 June 2014)	
6. Biosolids odor sampling	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	June 24-25, 2014 July 23-24, 2014	Complete (June 24-25, 2014) (July 23-24, 2014)	
7. Arcadis submits technical memo on odor monitoring (draft)	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	September 1, 2014	Complete (September 16, 2014)	
8. Draft Report Issued	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	November 1, 2014	Not complete	
9. Final Report Issued	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	January 1, 2015	Not complete	
10. Increase percent solids of biosolids (prior to lime addition) to 18%	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	December 31, 2015	Not complete	

This goal was added in response to public feedback regarding the consistency of the biosolids product- See Public Outreach Evaluation Form from November 8, 2013.

This is a comprehensive study that is analyzing the activities at the water treatment plants, Village Creek Water Reclamation Facility, and the dewatering facility at the Sludge Only Landfill and their effect on the overall quality of the biosolids material and its odors.

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GOAL: DAFT Overflow Project						
OBJECTIVE		MILESTONE	RESPONSIBLE PARTY	TARGETED COMPLETION DATE	STATUS	KEY OUTCOMES
1.	Design	Complete/not complete	Water Dept. Engineering	March 17, 2014	Complete (March 17, 2014)	<ul style="list-style-type: none">Environmental PerformanceRegulatory ComplianceImprove Biosolids Management Practices
2.	Construction	Complete/not complete	Gary LaGassey-Asst Water Sys Supt (Operations)	April 29, 2014	Complete (April 29, 2014)	
3.	Complete construction	Complete/not complete	Gary LaGassey-Asst Water Sys Supt (Operations)	June 13, 2014	Complete (June 11, 2014)	
4.	3 month trial period to Evaluate effectiveness	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager, Magan Lersch-Sr. Environmental Specialist	October 31, 2014	Not complete	
Increase percent solids of biosolids(prior to lime addition) by 2%		Complete/not complete	Steven L. Nutter-Biosolids EMS Manager, Magan Lersch-Sr. Environmental Specialist	October 31 2014	Not complete	
Adding 21 days to the construction end date (6-11-14) to account for digester detention time will result in a starting date of 08-01-14 for the 3 month trial period. The trial period will be completed on 10-31-14 to determine if percent solids have increased. A graph will be attached at the end of the trial period that illustrates the percent solids performance.						

GOAL: Dewatering Facility Upgrades					
OBJECTIVE	MILESTONE	RESPONSIBLE PARTY	TARGETED COMPLETION DATE	STATUS	KEY OUTCOMES
1. Hire consultant	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	April 18, 2014	Complete (April 18, 2014)	<ul style="list-style-type: none"> Environmental Performance Regulatory Compliance Improve Biosolids Management Practices
2. Electrical System Evaluation	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	July 11, 2014	Complete (August 27, 2014)	
3. Design	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	September 30, 2014	Not complete	
4. Install 6 th belt press	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	February 28, 2015	Not complete	
5. Upgrade polymer feed system	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	February 28, 2015	Not complete	
6. Upgrade lime system	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	February 28, 2015	Not Complete	
Increase percent solids of biosolids (prior to lime addition) by 3% for the 6th belt press only	Complete/not complete	Steven L. Nutter-Biosolids EMS Manager	31 December 2015	Not complete	

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GOAL: Minimize Struvite at Belt Filter Presses					
OBJECTIVE	MILESTONE	RESPONSIBLE PARTY	TARGETED COMPLETION DATE	STATUS	KEY OUTCOMES
1. Corroborate presence of struvite (collect samples)	Complete/not complete	Ana Pena-Sr. Professional Engineer	July 7, 2014	Complete (July 7, 2014)	<ul style="list-style-type: none"> Environmental Performance Improve Biosolids Management Practices
2. Install ferric addition station	Complete/not complete	Ana Pena-Sr. Professional Engineer	August 18, 2014	Complete (August 18, 2014)	
3. Optimize dosage of ferric sulfate	Complete/not complete	Ana Pena-Sr. Professional Engineer	December 31, 2014	Complete	
4. Optimize location of ferric addition station	Complete/not complete	Ana Pena-Sr. Professional Engineer	March 31, 2015	Not complete	
Reduce orthophosphate levels by 50%	Complete/not complete	Ana Pena-Sr. Professional Engineer	March 31, 2015	Not complete	

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Attachment 1

GOAL: Increase Biosolids Outreach Activities in Response to Public Concerns

OBJECTIVES

1. Identify four (4) public/third party concerns related to the biosolids value chain

1.a. For each concern, either contact three (3) external agencies or conduct presentation with one (1) external agency

1. Concern	1.a Action Taken	Targeted Completion Date	Status
Odor	Tour and presentation given to local city, county and state officials.	November 8, 2013	Complete (8 November 8, 2013)
Stormwater Runoff/Environmental Safety	Presentation given to Central High School and plant tour the next day.	April 17 & 18, 2014	Complete (April 17, 2014)
Food Crop Safety	Presentation given to Central High School and plant tour the next day.	April 17 & 18, 2014	Complete (April 17, 2014)
Cost to City	Presentation given to Central High School and plant tour the next day.	April 17 & 18, 2014	Complete (April 17, 2014)

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Attachment 1

GOAL: DAFT Overflow Project

OBJECTIVES

4. 3 month trial period to Evaluate effectiveness

Adding 21 days to the construction end date (6-11-14) to account for digester detention time will result in a starting date of 08-01-14 for the 3 month trial period. The trial period will be completed on 10-31-14 to determine if percent solids have increased. A graph will be attached at the end of the trial period that illustrates the percent solids performance.

Monthly Averages	
August	15.14 %
September	15.38 %
October	TBD

